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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,136	05/29/2001	Jeremy O'Hare	EMS-01502	7458

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PATENT GROUP  
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EXAMINER

HUYNH, KIM NGOC

ART UNIT PAPER NUMBER

2182

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/867,136

Applicant(s)

O'HARE ET AL.

Examiner

Kim Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1- 5, 12-20 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 6-11 and 21-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to because Figs. 1-3 lack labels. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3, 12-14, 18 and 27-29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

a. Claims 3 and 18 recite the limitation the first and second storage entities are the same. The specification does not provide any support as the to the first and second storage entities are the same and a data storage entity having two separate processors for processing a multi-execute command in the manner described in claim 1.

b. Claims 12 and 27 recite two processors in the same data storage entity. This limitation is not supported by the specification as discussed above. Subsequent dependent claims 13-14 and 28-28 are rejected accordingly.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-4, 15, and 18-19, 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claims 3 and 18 recite the limitation the first and second storage entities are the same. It is unclear if applicant defines "the same" as being similar type of storage device since the specification fails to provide a definition or support to the two storage entities being "the same".

b. Claims 4 and 19 contain the trademark/trade name Symmetrix<sup>TM</sup>. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name.

c. Claim 15 and 30 recite a first pair and second pair of two processors, at least one of the processor of each pair is included in a third and fourth storage entity respectively (third and fourth being different). Furthermore, it is unclear how the first and second pairs of processors related to the first and second processors recited in claim 1, and how the third and fourth storage entities relate to the first and second storage entities of claim 1. Applicant is required to point out in the disclosure or what applicant structure/embodiment of the disclosure the applicant relied upon for this limitation.

Correction/clarification required.

The following rejections are made based on the examiner's best interpretation of the claims in light of the 35 USC 112 rejections above.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 12-18, 20 and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Beal et al. (US 5,155,845).

a. Claims 1-2 and 16-17, Beal discloses a in (Figs. 1 and 7) a method and apparatus having programming code executed in a computer system for performing an operation on a plurality of processors (105 and 107) comprising: issuing a multi-

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execute command by a host system 101 to a first processor 105 in a first data storage entity 109 connected to the host system 101, said multi-execute command being a single system call indicating which processors perform at least one operation (single or dual copy) ; determining whether the first processor 107 is to perform a first operation associated with said multi-execute command (if the selected disk 109 is available, col. 17, ll. 25-35) and forwarding said multi-execute command to a second processor 107 in a second data storage entity 111 (col. 3, ll. 26-42); and determining whether the second processor 613 is to perform said first operation associated with said multi-execute command (checking availability of the disk as similarly described in the first processor).

b. Claims 3 and 18, as best understood in light of the 35 USC 112 rejection above, the examine will interpret that the two storage entities are of the same type or connected to the host via a common channel (see Fig. 1, channel 102).

In the alternative, Beal also discloses the host 101 issuing a multi-execute command specifying the volume of the disk to be written to. Each storage entity 105 include two clusters 501 and 507 each having a processor (608 and 613) for determining which processor is to handle the operation (write command) issued from the host.

c. Claims 5 and 20, Beal discloses the data structure indicating which processor is to perform the first operation associated with the multi-execute command (Fig. 18).

d. Claims 12-14 and 27-29, Beal discloses a shared memory (cache 512) is used for communicating data associated with the command between the two

processors 608 and 613, the data include input or output parameter or status information indicating error processing and tracking (col. 12, ll. 59-67).

e. Claims 15 and 30, as best understood in light of the 35 USC 112 rejection above, Beal discloses performing the first operation between the first pair of two processors (cluster processor 608 and 613 of disk controller 105 ), one of which being included in a third data storage entity 109 and performing between a second pair of two processors, one of which being included in a fourth data storage entity 111 different than the first (structure of disk controller 107 is the same as 105).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 19 are rejected under 35 U.S.C. 103(a) as obvious over Beal. Beal does not disclose the specific type of storage entities, however, it would have been obvious to one having ordinary skill in the art to utilize any type of available storage systems in order to provide data redundancy while providing high availability and performance level (col. 2, ll. 50-56).

***Allowable Subject Matter***

Claims 6-11 and 21-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter

Claims 6 and 21 recites, inter alia, the system and method of claim 5, wherein the step of determining a path of said multi-execute command which includes first and said processors, the path defines a portion of the two processors to forward the command, and the data structure is a bit vector having an entry associated with a corresponding processor included in the portion, each entry in the bit vector having a value of 1 or 0 corresponding to if the processor is to perform the operation.

The references of record do not teach or suggest the aforementioned limitation, nor would it be obvious to modify those references to include such limitation.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fukuzawa et al. (US 6,098,129), Sprague et al. (US 5,517,665) and Horn et al. (US 20020120644<sup>6</sup>) disclose various system/method for operating a multi-execute command in a plurality of processor.

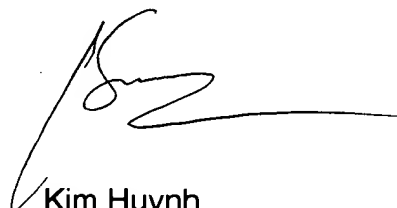


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571) 272-4147.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Kim Huynh', with a long horizontal stroke extending to the right.

Kim Huynh  
Primary Examiner  
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KH  
3/4/05